

REMARKS

In view of the final Action, RCE has been filed.

In paragraphs 3 and 4 of the final Action, claims 1-3 were rejected under 35 U.S.C. 112, first and second paragraphs. In paragraph 8 of the final Action, claims 1-3 were rejected under 35 U.S.C. 103(a) as being unpatentable over Spiro et al. in view of Kimura.

In view of the rejections, claims 1-3 have been amended, and new claims 11-13 have been filed. Namely, the hardness of the hardened layer is defined as disclosed in paragraph 0025 of the specification.

In the present invention, interference light is positively used to see different colors of a glass article or vessel depending on the angle of the view by the formation of a multilayer film. Also, the color of the glass vessel is recognized as complicated colors such as rainbow colors, iridescent colors, scale patterns, and the like.

Namely, glass bottles shown in the attached pictures include an appearance which can be recognized as respective complicated colors.

In contrast, a reflective coating for an electric lamp of Spiro et al. reflects not only visible light but also the infrared spectrum, and can reflect a wide range of wavelengths and prevent the degradation of a reflector.

Then, since Spiro et al. is the reflective coating for the electric lamp, there is no need for allowing the light of the electric lamp to be recognized as complicated colors, and even if the light of the electric lamp is recognized as complicated colors, that may cause trouble.

Therefore, the present invention can obtain an effect which cannot be anticipated from Spiro et al., and the present invention includes an inventive step over Spiro et al.

Also, since the glass vessel of the present invention is used for a makeup bottle, a medical bottle, and the like, as disclosed in [0020] of the specification as "without lowering the identity of the content excessively", the color or the content capacity of the content of the glass vessel of the present invention can be recognized even though the color of the glass vessel is recognized as complicated colors depending on the viewing angle. Namely, the glass vessel of the present invention utilizes not only optical reflection but also a light transmission.

Specifically, it is obvious that while the glass bottle of the attached pictures can be viewed as complicated colors, the color or the amount of the content can be easily recognized.

In contrast, Spiro et al. is a reflector for the electric lamp. Therefore, the visible light and the like are required to be highly reflected, so that there is no need for being transmitted.

As a result, it is obvious that the present invention can obtain an effect which is completely opposite to that of Spiro et al., so that the present invention is not obvious over Spiro et al. as clearly shown in the pictures attached herewith.

Further, in the present invention, in order to improve an adhesive force between the glass vessel and the multilayer film, the present invention disposes at least one layer of a silica layer, a chromium layer, a zirconium layer, and an aluminum layer as a lower layer.

In contrast, in Examples of Spiro et al., a layer having a high refractive index (titanium oxide layer in Example 2) is disposed.

Generally, in the case of carrying out a high reflection by using an interfering light, as shown in the attached Fig. A, the high reflection can be obtained by laminating layers on a base material in the order of a layer with a low refractive index and a layer with a high refractive index. On the other hand, in the case of carrying out a reduced reflection, as shown in the attached Fig. B, the reduced reflection can be obtained by laminating the layers on the base material in the order of the layer with the high refractive index and the layer with the low refractive index.

Then, even though Spiro et al. carries out the high reflection, the layers are laminated on the base material in the order of the layer with the high refractive index and the layer with the low refractive index, so that Spiro et al. is a special structure.

Therefore, even in the structure of the multilayer film, it is obvious that the present invention and Spiro et al. remarkably differ.

Still further, the present invention includes a hardened coating film constructed by specific resin with a predetermined thickness and a predetermined hardness between a surface of glass and the multilayer film comprised of multiple vapor deposition layers.

More specifically, in Tables 1, 2, in the case of comparing Examples 3 to 5 which have a white hardened coating film with a pencil hardness of 4H with Examples 8 to 10 which do not have the hardened coating film, the Examples which have the hardened coating film with a predetermined hardness have a higher pencil hardness of a multicolor development glass vessel after forming the multilayer film.

Then, the hardened film including the predetermined hardness between the surface of glass and the multilayer film, can not only

improve the adhesion property between the multilayer film and the surface of glass but also improve durability of the multilayer film. Accordingly, the glass vessel which is not only visually beautiful but also can preserve the beauty thereof can be manufactured.

In contrast, Spiro et al. does not disclose a concrete description regarding an inner layer. Also, Kimura et al. uses polysiloxane-based resin as an adhesive agent. However, the polysiloxane-based resin is used for protecting the base material from photocatalyst, and does not have the effect of improving photocatalytic strength.

Therefore, even if Kimura et al. is combined with Spiro et al., it is clear that effects of improving the adhesion property between the surface of glass and the multilayer film of the present invention as well as improving the durability of the multilayer film cannot be anticipated from the combination of Spiro et al. and Kimura et al.

Also, in Spiro et al., since the infrared spectrum with a predetermined wavelength or a visible light has to be reflected, the hardened coating film with the predetermined thickness comprising polysiloxane resin or the like which reduces a reflectance ratio, cannot be used.

More specifically, it is a heretofore known technology that light with a wavelength of 800 to 1,500 nm which is a near-infrared area is absorbed by functional groups of O-H, N-H, C-H wherein hydrogen is involved.

Then, in the case wherein the cured resin is provided in Spiro et al., it is difficult to allow the light with at least 50% or above to be reflected.

Therefore, there exists a disincentive in which Spiro et al. and Kimura et al. cannot be combined. Thus, the present invention

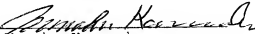
has an inventive step over the combination of Spiro et al. and Kimura et al.

As explained above, claims pending in the application are patentable over the cited references.

Reconsideration and allowance are earnestly solicited.

Respectfully Submitted,

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Figure A High refractive filter

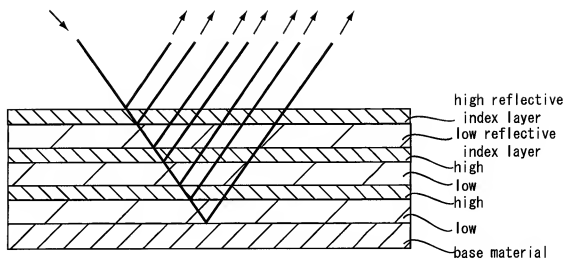
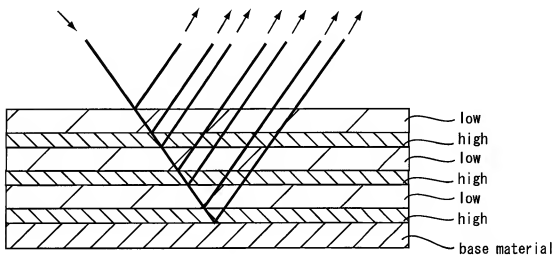
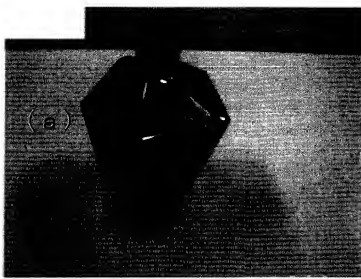


Figure B Anti refractive filter



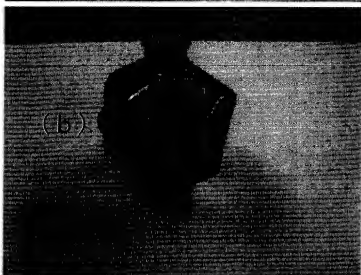
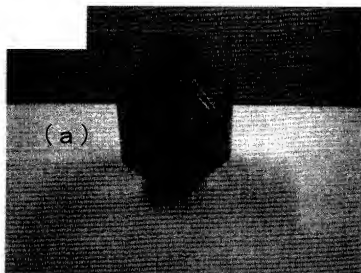
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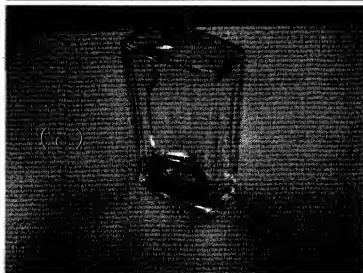
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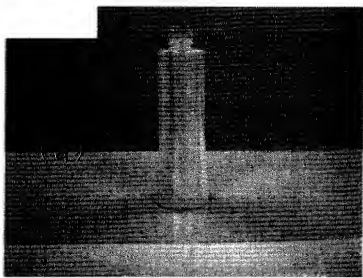
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No.3



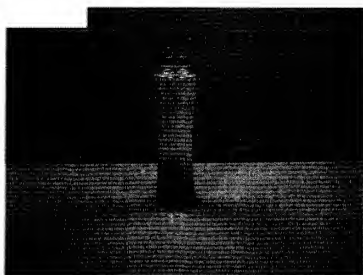
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No.5



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No.6

